

Remarks

The Office Action mailed September 9, 2005 has been received and reviewed. Claims 1 and 13 are amended in this paper to clarify details of an interaction between a resilient element and a bottle in certain embodiments of the invention. Claims 8 and 14 are amended to more accurately point out operating characteristics of a device structured according to certain aspects of the invention. Claims 6 and 10 are amended in harmony with the Examiner's requirement. Claims 11 and 12 are amended to point out certain details of preferred attachments between a brace and a conduit or bottle. No claims are added or canceled. Accordingly, claims 1 through 25 remain in the case before the Examiner.

OBJECTION TO THE DRAWINGS

The objection to the "too-small" spacing between FIGs. 4 and 5 in the as-filed drawings is believed to be mooted by changes made on the attached proposed replacement sheet. A proposed change to increase the spacing between FIGs. 4 and 5, by moving airline 106 and compressed air source 104 away from FIG. 5, is indicated in red on the replacement page. As noted by the Examiner, the drawings are informal. It is Applicant's intention to submit Formal drawings subsequent to receipt of a Notice of allowable subject matter. Approval and entrance of the replacement drawing sheet is requested. Subsequent to entrance of the replacement sheet, the objection to the drawings should be withdrawn.

OBJECTION TO THE DISCLOSURE

The objection to the disclosure should be mooted by entrance of replacement paragraphs [33, 34]. Replacement paragraphs [33, 34] are amended to change the numerals as specified by the Examiner. The objection to the disclosure should be withdrawn subsequent to entrance of the instant replacement paragraphs.

OBJECTION TO THE CLAIMS

The objection to the claims is believed to be mooted by amendment to claims 6 and 10 made responsive to the Examiner's requirement. Applicant believes that no scope is surrendered by the instant

amendment to these claims in that as-filed and amended claims 6 and 10 are written in open form, thereby encompassing identical subject matter. Furthermore, the instant amendment of claims 6 and 10 is not made for any purpose related to patentability, and no equivalents are surrendered.

35 U.S.C. § 103:

The various rejections of claims 1-25 under 35 U.S.C. § 103 are traversed, but in certain cases, are further avoided by amendment made in this paper. A proper *prima facie* case has not been established with respect to any of these claims. The rejections fail to point out where, in the references themselves, any suggestion to make a combination resulting in a structure within the ambit of the claims can be found. The mere fact that (even off-the-shelf) components *can be* assembled to form a claimed structure does not make such claimed structure “obvious”, and cannot properly sustain a rejection as a matter of law set forth in 35 U.S.C. § 103(a). A rejection lacking proper support in the references themselves smacks of having a basis only in improper hindsight reconstruction.

Claim 1

The rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker in view of Schwarzenzer is traversed, but is further avoided by amendment to claim 1 made in this paper. As-filed, claim 1 required a resilient element adapted to engage a cylindrical portion of a bottle. Additionally, the claimed resilient element must be effective to suspend the bottle in a socket. Applicant submits that the reference fails to disclose a resilient element within the ambit of even as-filed claim 1. It is believed to be a stretch for a cardboard ring, structured according to the cited reference, to be capable of engaging a cylindrical portion of a bottle and suspending that bottle in a socket.

As understood, Schwarzenzer discloses a ring “C” preferably made from cardboard and having a radial dimension of its cross-section sufficient to impart rigidity to resist the deflection of a paper cup “A”, which is illustrated in FIG. 4 (Col. 1, line 31 through Col. 2, line 16). Furthermore, the disclosed cup “A” is significantly conical, in contrast to the “cylindrical portion of said bottle” recited in claim 1. Therefore, an inside diameter of ring “C” engages cup “A” at only one place along the cup’s axis. Suspension of the

cup “A” by ring “C” can be effected because the conic portion causes a structural interference with the inside diameter of the ring “C” to resist further passage of the cup through the ring.

Logically, a combination of the structures disclosed in the references would produce a pump bottle having a tapered, or conic, shape adapted to engage a rigid ring at a single location. As amended, claim 1 now requires the resilient element to engage the bottle at a plurality of locations along its axis. Furthermore, amended claim 1 requires the resilient element to form a self-biased engagement at that plurality of locations. Structure having such characteristics cannot logically be adduced from any combination of structure disclosed in the cited references. Support for the amendment can be found at paragraph [28].

Furthermore, Knickerbocker fails to disclose an atomizing nozzle to discharge fluids. Applicant submits that exit orifice 26 is never characterized in the cited reference as being an atomizing nozzle. In contrast, claim 1 is directed toward an atomizer of the type in which a fluid housed inside a container is ejected through a nozzle. A logical combination of the structures disclosed in the cited references fails to produce a structure within the ambit of claim 1. This rejection should now be withdrawn.

Claim 2

The rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker and Schwarzenzer as applied to claim 1 above, and further in view of Yurdin is traversed. Yurdin is apparently relied upon only for his disclosure of a self-supporting, bendable, shape-retaining discharge conduit. In any case, Yurdin does not supply the disclosure or suggestion, which Applicant believes to be missing in the principle references, to form a structure including either of an atomizing nozzle or a resilient element within the ambit of base claim 1, from which claim 2 depends.

Furthermore, the rejection fails to point out any suggestion or motivation, in the references themselves, to make the specific structural changes required to place a malleable and deformable discharge conduit between the disclosed pump mechanism and an atomizing nozzle. Yurdin discloses a discharge tube having an open distal end for passage of fluid, such as oil to a machine, as illustrated in FIG. 1 and discussed at Col. 3, lines 55-60. Arguendo, if somehow Yurdin’s conduit were grafted onto

Knickerbocker's pump mechanism, the discharge nozzle orifice 26 would logically be disposed at the wrong (proximal) end of the conduit, contrary to one requirement of the base claim. Further, the discharge end would lack an atomizing nozzle. The open end of Yurdin's conduit cannot reasonably construed as meeting the limitation for an atomizing nozzle required by claim 2. Therefore, it follows that bending Yurdin's tube would not orient a discharge from an atomizing nozzle. This rejection of claim 2 should now be withdrawn.

Claims 3-7

The rejection of claims 3-7 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker, Schwarzenzer, and Yurdin as applied to claims 1 and 2 above, and further in view of Cobb is traversed. Cobb is apparently relied upon only for his disclosure of a brace element adapted to couple with an extension conduit from a spray nozzle. Applicant submits that Cobb fails to disclose or suggest structure satisfying the defects noted above in connection with claims 1 and 2, from which claims 3-7 variously depend.

The rejection asserts that the motivation to add the brace of Cobb to the modified sprayer would be to secure the conduit to the base. Applicant supposes that the cited "base" corresponds to the spray button 24. However, claim 3 (and claims 4-7 depending therefrom) requires the brace to "resist movement of said nozzle during actuation of said pump mechanism", which is completely unrelated to securing components together. Furthermore, FIG. 2 illustrates an extension conduit combined with a pump head in a workable embodiment lacking a brace.

It is not clear to Applicant that restraint against displacement of a discharge end of tube 36 by structure carried by his brace is even contemplated by Cobb. The rejection fails to point out with any specificity where in the reference such suggestion is found. It must be noted that Cobb discloses structure attached to an internally pressurized spray can 10. Such pressurized spray devices require a significantly smaller vertical deflection of the spray head 24 to cause a discharge, compared to the gross movement of a mechanical pump head required to pressurize fluid for ejection. Furthermore, the spray button 24 is held at a constant position during discharge of pressurized fluid, compared to the cyclic up-and-down actuation

of a mechanical pump head required to cause a fluid discharge. The difference in behavior between the two types of spray mechanisms logically prevents the simple combination of structure suggested in the rejection.

Furthermore, both of claims 4 and 5 recite a clip-on attachment, which cannot logically be adduced from any structure disclosed by Cobb. With reference to FIGs. 4 and 5, brace 238 carries attach structure 242 adapted to clip-on to bottle neck 250. Clip-on attachment is effected by pressing open end of structure 242 transversely onto the bottle neck 250. In contrast, Cobb discloses (FIGs. 1 and 2) ring 32 that substantially wraps lip 22 and precludes clip-on attachment. Instead, Cobb's lip 22 must be inserted axially into a bore formed in ring 32. Similarly, attach channel 252 (FIG. 5) is adapted for clip-on attachment to conduit 215 by pressing conduit 215 transversely into reception inside channel 252. In contrast to the required clip-on attachment, all of Cobb's tubes are inserted axially into reception in bores 58, 78.

It is contemplated that vertical actuation of a pump head can cause a corresponding horizontal movement of a fulcrum location of a brace, particularly in the case where the fulcrum is affixed to the conduit and the proximal conduit portion forms a straight line between the pump head and fulcrum. Broadly, claim 7 requires that the brace is structured to cause that fulcrum location to be disposed substantially at a mid-elevation height compared to top and bottom pump head positions. As set forth at paragraph [36], plane geometry would characterize such an arrangement as essentially forming an Equilateral triangle with a base defined by an imaginary segment disposed between pump head top and bottom positions, and having similar sides formed by the proximal conduit portion (stretching between pump head and fulcrum at top and bottom stroke positions), with the claimed fulcrum disposed at the triangle's peak, and the fulcrum elevation corresponding to a midpoint along the base. Such an orientation of structure in space minimizes a required horizontal movement of the fulcrum as the pump head is actuated. The rejection fails to point out where Cobb makes a suggestion to form such motion-limiting arrangement of structure. The rejection of claims 3-7 should now be withdrawn.

Claims 8-12

The rejection of claims 8-12 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker in view of Yurdin and Cobb is traversed. Applicant submits that a combination of the structures disclosed in (or suggested by) the cited references does not result in the asserted structure. Arguendo, suppose Yurdin's conduit were grafted onto Knickerbocker's pump mechanism, and then combined with Cobb's brace. Similar to the argument advanced previously, in connection with claim 1 above, Applicant submits that the logically resulting device would have a braced malleable conduit attached to a pump head, but would lack an atomizing discharge nozzle spaced apart from the pump head by the malleable conduit. Such resulting structure would be in conflict with the explicit requirement of base claim 8 that the malleable conduit be disposed *between* the pump head and atomizing nozzle. Not only does the rejection fail to point out where in the references motivation may be found to space an atomizing discharge nozzle spaced apart from a pump head by a malleable conduit, but the suggestion for an atomizing nozzle itself is missing.

With respect to claim 9, Applicant respectfully disagrees with the construction asserted in the rejection, and submits that the logical combination of structures disclosed in the references fails to dispose an atomizing nozzle at a distal end of a malleable conduit. In contrast, grafting Cobb's conduit onto Knickerbocker's pump mechanism results in an assembly lacking an atomizing nozzle at a distal end of the conduit. Therefore, bending the conduit could not change a discharge direction of the recited fluid atomizing nozzle.

With respect to claim 10, the same arguments advanced above in connection with claim 7, also apply. The rejection fails to point out where any combination of references suggests the disposition of the fulcrum at a mid-elevation position, with respect to pump head vertical actuation, to resist horizontal displacement of the fulcrum.

With respect to claim 11, this claim is now amended to require the brace to be structured for "clip-on attachment to the conduit to permit removal of a unitary assembly comprising said pump head, the conduit, and said atomizing nozzle". As advanced in connection with claims 4 and 5 above, the clip-on attachment now required by claim 11 is not suggested by the asserted combination. Furthermore, claim 11 now requires interconnection between structures effective to permit removal of a unitary assembly

including the pump head, conduit, and atomizing nozzle. In contrast, Cobb fails to suggest such an arrangement of structure. It appears to Applicant that removal of spray head 24 would inevitably result in decoupling conduit 36 from head 24. Furthermore, no atomizing nozzle is present in the structure logically formed by the asserted combination.

Claim 12 is amended to depend from claim 8, which is believed to be allowable and to avoid this rejection. However, similar to claim 11, claim 12 is also amended to require the claimed device be structured to permit removal of the pump head, conduit, and atomizing nozzle as a unitary assembly. It is believed that no such functionality is even suggested in the disclosures of the combined references. The rejection of claims 8-12 should now be withdrawn.

Claim 13

The rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker, Yurdin, and Cobb, as applied to claim 8, and further in view of Schwarzenzer is traversed. As argued in connection with claim 1 above, Schwarzenzer fails to disclose a resilient element within the ambit of even as-filed base claim 8, from which claim 13 depends. Furthermore, claim 13 is amended in this paper to require the resilient element be able to engage the bottle at a plurality of locations along an axis of the bottle. Such requirement is distinguishable over the single location at which Schwarzenzer's rigid ring "C" can interface with his tapered cup "A". The rejection of claim 13 should now be withdrawn.

Claim 14

The rejection of claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker in view of Yurdin is traversed. The rejection admits that Knickerbocker fails to disclose a malleable and deformable conduit. Applicant submits that Knickerbocker also fails to disclose, or fairly suggest, the fluid atomizing nozzle required by claim 14. Yurdin is asserted apparently only for his disclosure of a malleable and deformable conduit. Applicant submits that Yurdin also fails to disclose, or fairly suggest, the fluid atomizing nozzle required by claim 14. Therefore, the combination of structures disclosed in the cited references fails to include, or to suggest, a limitation recited in independent base claim 14. Arguments

advanced above with respect to defects in the disclosures of the cited references with respect to claims 1 and 8 also apply to the rejection of claim 14. The rejection of claim 14 is improper, and should now be withdrawn.

Claims 15-19

The rejection of claims 15-19 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker and Yurdin as applied to claim 14, and further in view of Cobb is traversed. Cobb is apparently asserted only for disclosing a brace. Applicant submits that Cobb fails to disclose or suggest the fluid atomizing nozzle missing from the combined principle references as argued above with respect to claim 14. Furthermore, the motivation attributed to Cobb to make the combination is equally misapplied to claims 15-19, as submitted in connection with claims 3-7 above. Claims 15-19 variously depend from base claim 14, and are each thereby believed to avoid this rejection.

With respect to claim 15, Applicant submits that the operational characteristics of a push-button aerosol spray can as disclosed by Cobb are sufficiently different from the operational characteristics of a mechanical pump bottle within the ambit of the instant claims that combining structures from the three references is inappropriate. As argued in connection with claims 3-7 above, the press-and-hold operation of a spray can button 24 inherently limits motion of a discharge orifice 26 (and corresponding orifice 64 at a distal end of tube 36). In contrast, a pump mechanism 212 within the ambit of the instant claims requires an up-and-down motion to cause a discharge of fluid through the atomizing nozzle. Such motion desirably is resisted in certain embodiments (e.g. as recited by claim 15), by incorporation of a brace 238 adapted to hold the nozzle 218 in a reasonably steady relationship with respect to a target.

Similar to claim 5, claim 17 requires a clip-on attachment not suggested by any combination of the references. Arguments directed to clip-on attachment, as advanced above in connection with claim 5, also apply to claim 17.

Claim 18 requires a “proximal portion of said conduit, located between said pump head and structure carried at the second end of said brace, is configured and arranged to reduce a horizontal deflection of said nozzle during actuation of said pump mechanism”. Such language reads on a mid-pont

fulcrum such as recited in claim 7 and 10, as well as on a nonlinear path along the proximal conduit portion between the pump head and fulcrum. As claimed, a nonlinear proximal portion can extend and retract to reduce causing an impact on the discharge nozzle location by actuating the pump head (and causing a deflection in the proximal end). Behavior of a nonlinear conduit portion is characterized at paragraph [36]. It is believed that no combination of the references suggests such claimed nozzle restraint arrangement. The arguments advanced with respect to claims 7 and 10, above, also apply to both of claims 18 and 19. The rejection of claims 15-19 should now be withdrawn.

Claim 20

The rejection of claims 15-19 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker and Yurdin as applied to claim 14, and further in view of Schwarzenzer is traversed. Schwarzenzer is apparently asserted for disclosing a ring “C” operable to suspend a container “A”. However, Applicant submits that Schwarzenzer fails to disclose, or suggest, structure sufficient to cure the defect noted with the rejection of base claim 14, as advanced above. The rejection of claim 20 should be withdrawn.

Claims 21-23

The rejection of claims 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker in view of Yurdin is traversed. The arguments advanced in connection with claim 14 above also apply to base claim 21. Nothing in the asserted combination suggests the fluid atomizing nozzle required by independent base claim 21. With respect to claims 22 and 23, Applicant respectfully submits that the rejection misapprehends the structure illustrated in FIG. 3. It is believed that Yurdin discloses a conduit having only a single lumen, in which single lumen deformable member 18 resides. Therefore, Yurdin cannot reasonably be construed as suggesting the multilumen conduit required by claim 22. It necessarily follows that Yurdin cannot reasonably suggest the disposition of a deformable wire disposed in one lumen of a multilumen conduit, as required by claim 23. The rejection of claims 21-23 should now be withdrawn.

Claims 24 and 25

The rejection of claims 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Knickerbocker and Yurdin as applied to claims 21-23, and further in view of Cobb is traversed. Cobb is apparently asserted only for his disclosure of a brace. However, Applicant submits that Cobb fails to disclose, or suggest, structure sufficient to cure the defect noted with the rejection of base claim 21, as advanced above in connection with the rejection of claims 21-23. Nothing in the asserted combination suggests the fluid atomizing nozzle required by independent base claim 21.

Furthermore, claim 25 requires that a proximal conduit portion “disposed between said pump head and an attach location on said conduit for structure carried by said brace, can be arranged in a nonlinear configuration whereby to permit vertical displacement of said pump head to actuate said pump mechanism while reducing a correspondingly required horizontal displacement of said attach structure”. Behavior of a nonlinear conduit portion is characterized at paragraph [36]. It is believed that no combination of the references suggests such claimed nozzle restraint arrangement. The rejection of claims 24 and 25 should now be withdrawn.

PRIOR ART MADE OF RECORD:

A cursory review of the prior art made of record in the Office Action does not indicate that such art is more relevant than art already relied upon.

Conclusion

Applicant requests that the instant amendment be entered and that a Notice of Allowance be issued for claims 1-25. If any questions or issues remain which might most conveniently be resolved by telephone interview, the Examiner is respectfully requested to communicate with the representative at the below indicated contact information.

Respectfully submitted,



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APPENDIX A

(REPLACEMENT SHEET OF FIGS. 4, 5, 6, 7 AND 8
ANNOTATED SHEETS SHOWING CHANGES)

(Attorney Docket No.: "2078-5372US")
(Serial No. "10/618,459")



FIG 4 PRIOR ART

